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ABSTRACT

This publication outlines a unit of study which uses speculative fiction and artistic expression to help students in grades 7-12 view technology and understand how it changes. Speculative fiction is defined as that type of fiction that deals with different assumptions and projections about the future. Throughout the unit the art form highlighted is surrealism. The authors note that although a step-by-step approach to teaching the unit is not provided, an outline and suggestions for activities are provided. The developers have placed more responsibility on the teacher because they believe that something of value must involve a good measure of work. Topics in the unit include man controlling technology, looking into space, the nature of change, man as a robot, mindless technology, the impact of organizations on the environment, cities of the future, and creating a better future through technology. Some examples of the many activities suggested follow. Students pretend they are a space ship and draw a picture of the way they look, collect articles from magazines and newspapers that reflect man's control or attempted control over nature, and write and illustrate a story explaining how they sometimes feel like a machine. Students also analyze surrealist paintings, do a collage fantasy, write a short story about a robot that they control, and are involved in many classroom discussions. The publication concludes with bibliographies of teacher and student resources. (Author/RM)

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A STEP THROUGH THE LOOKING GLASS:

PERPETUATING CREATIVITY THROUGH SPECULATIVE FICTION AND CONTEMPORARY ART

(A unit using speculative art forms as vehicles in understanding the nature of technological change.)

SO 013 491

Bob Cronberg

Linda Petrzalek

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Introduction

The following unit which hopefully you are about to look over and utilize, has been the result of many months of study, research, thinking, and feeling. It has been rewritten, thrown away and brought back to life again and again. More importantly, this unit has become a process for us and we feel that it should be approached by teachers as well as students in this manner. It is not a "whole" within itself but rather more of a "filler" unit. This, we believe, allows for a greater amount of flexibility in its application.

Structurally speaking, our unit does not follow a traditional format, but instead utilizes an "in-formal" outline style. We felt this would not only facilitate flexibility but would allow students to take their time with various elaborate activities and processes employed without feeling any pressure to "finish things up."

Description

Speculative fiction is that type of fiction which deals with different assumptions and their projections about future conditions. It incorporates cause and effect relationships, forecasting, and an awareness of the immense value of speculation. In addition, speculative writers have always seemed to be concerned with the "human condition" as it is confronted by excessive technology or scientific progress.

There is a prevailing attitude which is developed throughout the unit of a basic quality and goodness in the human individual that cannot be eradicated by technology--the variable we chose to examine. This humanistic segment of speculative fiction is pervasive and is based on the notion that man is fully capable of solving and dealing with technological problems while at the same time insuring that the dignity, worth and value of each individual remains intact. We believe that this type of fiction is quite

appropriate and offers much in an age when people are being continuously exposed to many new and changing technologies that have the capacities to create a "Future Shock" if not understood and controlled.

In addition to using speculative fiction as a process to view technology, we also decided to include artistic expression as a vehicle to not only experiment with technology but to understand how it changes as well.

In all processes involving creativity, it is imagination that transforms the mundane experience into a work of art. It is our desire that upon completion of this unit youngsters will have acquired a knowledge of aspects comprising a creative act and be able to express this knowledge using verbal, written, and artistic means.

To understand an artist's work is to also understand that an artist often mirrors his environment and in addition expresses his desires, hopes, and feelings concerning that environment. We believe this notion is common to all art and to all artists. For this reason to isolate one particular art form for use in conjunction with this unit would be a grievous error--our hope for this unit is to help youngsters to accept and imagine ideas foreign to them. For an instructor to say then, that (realism) as a method of expression is acceptable for use in this unit, but that student initiated ideas are inappropriate is to defeat the purpose of the unit. We have chosen to highlight surrealism in our version of the outline simply because it is often neglected in an elementary school curriculum, but other art forms as a means of expression would also be valuable.

Surrealism in art means upsetting familiar associations and producing fantastic or incongruous imagery by emphasizing the unnatural or unexpected. In 1924 Andre Brenton's Manifesto of Surrealism explained that surrealism depends on spontaneous, intuitive, and undirected vision. His documents, interestingly enough, are closely related to the work done by Huxley, Wells,

and Orwell during the 1920's and 1930's. This would seem to show a correlation between the artist's and writer's worlds and how they both feel the effects of a technological environment.

A contemporary surrealist's work that could be easily utilized in a classroom situation would be Joan Miro, Paul Klee, or René Magritte, or Salvador Dali. The Graphic Works of M.C. Escher would also be valuable as a text because the artist himself provides commentary to accompany the prints. A historical perspective can also be developed by examining the works of Bosh, Bruegal, Leonardo, and Goya--artists who influenced contemporary surrealists.

Through examination of art and artists, students will hopefully discover that fantasy provides the most familiar form of imaginative creation. Creative persons use fantasy and draw on the subconscious, dream states, or memory for developing unexpected combinations of objects. Each day of our unit outline is built around the premise that the steps involved in a creative act are all essential ones and ought not to be pushed aside by school or class structure. Each day involves a stimulus or impulse for action on the part of the youngsters. An exploration or gestation period follows this, along with time allowances for the seemingly spontaneous outpouring of ideas. Lastly, critical shaping and refining of ideas is encouraged.

From the outset we have recognized the compatibility of both art forms. Perhaps one of the first real indications of this relationship becomes apparent when we look at how speculative writers and contemporary artists view the nature of reality. Rather than looking at things through a "tunnel vision" both art forms seem to use a "systems approach." They need to utilize all the senses and resources at their disposal. There is also a basic position inherent in both that every individual's reality is influenced by his notions about that reality and that these notions cannot develop in an isolated environment.

What results from this is a very complex, abstract picture. It is a depiction of life as it should be; full of excitement, mystery, change and doubt. Futhermore, we feel that both are quite legitimate mediums (which has not always been the case in the past) and can be useful in terms of developing self-awareness (In this context we mean becoming aware of one's existing patterns of behavior in a way that permits an open reaction and confrontation of these already established patterns with new experiences that have the potential for changing some of the patterns.), other-awareness (i.e., becoming aware of anothers behavioural patterns and recognizing them as being unique in and of themselves.), and lateral thinking (i.e., an alternate mode of thinking in which one perceives reality from a different perspective.

The Teaching Learning Process

A basic concern that we have had throughout the process of developing this unit has been how the student is feeling about the subject matter, himself, and the relationship between the two. It is our position that if a student's relationship with the subject matter is not made personally meaningful to him he may not return to it in the future. Worse yet, he may become afraid to experiment with anything new. To employ this unit under these conditions would be a disaster. It is essential therefore that many of you consider taking some risks. Research has pointed out, for example, the virtues of: a decentralization of authority, an accepting attitude towards confusion, letting children become more mobile and vocal, and changing criteria of evaluation to more of an internal assessment. While employing these risks may seem a bit threatening, they are nevertheless essential to a truly creative, imaginative, and productive environment. These are among the first steps in the unit and one should not proceed until s/he has considered the implications of what we are suggesting.

This unit has been designed to serve many different purposes, not only in terms of the content that is covered but also in terms of goals and objectives. We have decided not to include them as an actual part of the unit because it would be extremely difficult to predict the outcome and influence that each activity or content area would have. Some may have a tremendous impact on certain students, while others will fall short. However, there have been certain objectives, problems, and goals that we kept in mind when developing content areas and activities. Among these were:

1. to facilitate the development of one's imagination.
2. to develop lateral ways of thinking.
3. to develop an understanding of how the past, present, and future are all interrelated.
4. to develop an appreciation and interest in different speculative

art forms.

5. to recognize that both speculative fiction and contemporary art forms are not only legitimate but in fact are useful tools for the choosing and developing of alternate futures.
6. an understanding of how different technologies affect our daily lives.
7. an understanding of how changing environments may affect our perceptions of the future.
8. to take responsibility for our actions.
9. to encourage the student to think of his or her "self" as subject to a great deal of change.
10. developing an awareness of the relationship between the harmony of various personality elements and the harmony that is witnessed in an artist's creation.
11. to understand different types of realities and how they differ among people.
12. to develop empathy (identification with subject.)
13. to see combinations of, and relationships between, objects and ideas that do not exist in the external world.
14. the ability to generalize (find sameness in the non-similar.)
15. the ability to particularize (find differences in the similar.)

A major question arose during this process that concerned the grade level we were trying to deal with. We both have worked in enough classrooms to realize that with any unit some students will catch on while others will not. This is a dilemma that makes teaching a challenging profession however, and is encountered by every teacher at some time or another. We personally know of third grade students advanced enough to comprehend many of the content areas we include. At the same time, we also know of students in upper grade levels who are not, as of yet, ready to jump in. However for its general use and application we do recommend that this "unit" be used in Junior High or High School. Never the less, it is our hope that you will be flexible enough to manipulate the material found here to suit your purposes and needs, whatever the grade level.

In essence, we have discussed our hopes for this unit in terms of our desires for students--but very little has been said in regard to instructor expectations.

Units designed for schools by large publishing companies do not often deal with teacher expectations in their programs. The reason for that omission might be that the teacher's role is carefully spelled out detail by detail. By following these instructions to the letter, teacher creativity and spontaneaity is discouraged, and the instructor's intellectual curiosity is often diminished. As one member of an education department here in Iowa remarked, "We don't want you to think. We want you to follow what's in the teacher's guide."

Our approach to this topic is quite different. We do not attempt to program responses for teachers when only they can judge the climate of their particular classroom. By not listing a step-by-step approach to teaching this unit we have placed more responsibility on teachers (and students) for the way they will direct themselves and the learning process. This concept remains consistent with our belief that something of value must involve a good measure of work and that, in the final analysis, our horizons are only limited by our imaginations.

UNIT OUTLINE
(first week)

Title: A Step Through the Looking Glass

Thesis: Writing and drawing are really extensions of yourself.

I. Stepping into Yourself

A. Pretend you are a space ship--draw a picture of what you look like.

B. Now write a story and tell everyone where you came from and where you are going. What are you searching for? How does it feel to be a space ship in outer space? (Alone or with people inside you...)

C. Experiences

1. Class discussion of goals and expectations of unit.

2. Class discussion of drawings and papers.

3. Class preparation of journals. (see note #1)

II. Speculative Fiction and Surrealism

A. Discussion

1. What is "speculative fiction?"

(Note: Through the previous activities the class should have gained an awareness albeit limited that Speculative Fiction is simply a creative search or anticipation of what may or may not be...)

2. What are projections and assumptions about the future?

B. What is surrealism?

(Note: Again an awareness should be gained by students that surrealism is a "speculative" way of viewing your environment by interpreting mental images through various mediums.)

1. What is real?

C. Experiences

1. Cause and effect relationships (see activity #1.)
2. Discover the person next to you (see activity #2.)
3. Review and discussion.
4. Make entry in journal.

III. Man Controlling Technology

A. Discussion and Research (see note #3.)

1. What is technology? (You cannot control something unless you understand it.)
2. How does technology affect what we do?
3. How does technology influence our life-style?
4. What is good about technology? What is bad about it?
5. What types of technologies do you use? What types of technologies use you?

B. Experiences

1. Predicting the future of technology (see activity #3.)
2. Review: How has technology affected the way people draw and write? (Show examples.)

IV. Looking into Space

A. Discussion

1. People as strangers to their inner space (man is constantly searching for meaning within himself.)
2. What is man's need to conquer different spaces--outer space?
3 Will man find what he is searching for?

B. Experiences

1. Searching for a new world (see activity #4.)
2. Review: How does technology affect our searching of inner and outer space?

3. General class discussion of experiences.
4. Make entry in journal.

V. What is Change?

A. Discussion

1. How do we change from day to day?
   a. moods
   b. attitudes
   c. values
2. How does technology change?
   a. Development of complex and elaborate machines--cybernetics.
   b. Developing more effective ways of changing structures of raw materials.
   c. Depletion of resources.

B. Experiences

1. Clinging to things in the past (see activity #6.)
2. Discussion of activity.
3. Review: Class discussion of the first week's work.
4. Make entry in journal (What did you learn/teach this week as a learner/teacher?)

UNIT OUTLINE
(second week)

Title: The Machine Within Us

Thesis: We are all aware of the machines we use to help us in our daily activities, but what about the machine within us that prevents us from living fully?

Home Study: Write a story explaining how you sometimes feel like a machine. Include any experiences, drawings, etc.

VI. The Computer Around the Corner

A. Discussion

1. Increasing technological advancements will, in part, make available the things we want.
2. Throughout history, we have seen how man has tried to change natural things to suit his purposes--in short to control nature.
3. We are all striving for goals in such ways that we manipulate our external resources.

B. Experiences

1. Predicting your own future (see activity #7, parts I, II, and III.)
2. Discussion of activity.
3. (Home Study) Collect articles from magazines and newspapers that reflect man's control or attempted control over nature.
4. Make entry in journal.

VII. "Mindless" Technology

A. Discussion

1. Technology can be beneficial to man, but it is "mindless." If left undirected it goes along with a momentum all its own.
2. Almost all the major technological changes since the beginning of

industrialization have resulted in unforeseen consequences.

3. Behavior control technology seeks to cure "anti-social" people through Psychosurgery.

B. Experiences

1. Predicting your own future (see part IV of activity #7.)
2. Discussion of activity.
3. Controlling the way we live (see activity #8, part I and II.)
4. Make entry in journal.

VIII. Man as a Robot

A. Discussion

1. We are called robots sometimes because often it seems as though we are not in control of ourselves.
2. A robot is more efficient than a human--it is not impaired with feelings or emotions and is equipped with a computer mind that acts on command.

B. Experiences

1. Control a robot (see activity #9, parts I and II.)
2. Discussion and sharing of stories.
3. Make an entry in journal.

IX. Free Study (see note #2)

X. The Conquest of the Machine

A. Discussion

1. If we have full control over the many technologies we encounter, then they can be useful to us.
2. If we have an awareness of the many technologies we have within ourselves, then we can lead a fuller life.

B. Experiences

1. Control a computer (see activity #10.)
2. Exercise in dis-identification (see activity #11.)

   Write in journal.
3. Drawing
   a. Draw yourself in abstract form in whatever shade, style, form, or design that emerges NOW within you.
   b. Draw destruction--your view.
   c. Draw creation--your view.
   d. Free drawing--let it happen. Follow your pencil. What do you experience?
   e. Look at some surrealist's paintings. How does the artist portray destruction, control, or creation? Now look at Escher's "Hand with Reflecting Glove." (print 51 in The Graphic Work of M.C. Escher.) Does this man (the artist) have control over his environment? Is he the center of his environment? Are you the center of your environment? Paint yourself in relation to your world as he has done.

UNIT OUTLINE
(third week)

Title: Man and his Environment

Thesis: In this country, technology has had an incredible impact upon the landscape, the natural environment, the spaciousness of life and privacy.

Home Study: Begin to notice how technology is helping to build and destroy the environment around you. Draw and write how your environment is changing. How do you feel about this?

XI. Abundance is in Limited Quantity

A. Discussion

1. The problem is not how to get to the moon but how to avoid running out of space here on earth.
2. Over-crowding produces an unhealthy atmosphere in which to live.
3. Just as important as food is for maintaining physical life, the environment is equally as important. The desire for quiet, privacy, independence, and open space constitute real biological necessities.

B. Experiences

1. Analyzing trends (see activity #12.)
2. Discussion--have a sharing session of stories. Also look at drawings and compare them. Why do they differ?
3. Make an entry in journal.

XII. The Impact of Organizations on the Environment

A. Discussion

1. Organizations will increasingly determine the structure and content of our lives.

2. Eventually people will become whatever their profession demands they become.
3. Under these conditions, people will become strangers to themselves and to their "internal" environment.

B. Experiences

1. Power-dependence relationships (see activity #13 and #14.)
2. Discussion of short stories.
3. Make entry in journal.

XIII. Free Study (see note #2.)

XIV. "We had no choice but to live where there was enough space."

A. Discussion

1. Urban societies may spring up as the response to rural environments decreases.
2. As cities become more complex and confusing however, there may well be a push towards a more rural atmosphere.
3. Man is becoming more mobile in his jobs, communities, etc. What is he searching for?

B. Experiences

1. Design a city of the future (see activity #15.)
2. Comparison of drawings--how do they differ? Discussion.
3. Make entry in journal.

XV. Humanity: The Determining Factor

A. Discussion

1. We do have a choice--what will it be?
2. In order to preserve the environment, man has to make sacrifices. What sacrifices will you make?

B. Experiences

1. See activity #16.
2. Class discussion of activity.
3. General class discussion of course thus far.
4. Make entry in journal.

UNIT OUTLINE - FINAL SESSIONS
(fourth week)

Title: Creating a Better Future Today Through Technology and Speculative Art Forms

Thesis: The world can be changed with the help of technology to suit our individual needs and demands.

Home Study: Create something that reflects a few of the things you have learned these past three weeks. It must be something that you will be able to use in the future.

XVI. "Everything that they wrote and created was, in part, a response to the future they imagined and expected."

A. Discussion

1. What is your image of the future now?
2. How does technology fit into this image?
3. The universe is the biggest technological system. (The universe will always be with us--therefore technology will be as well.)

B. Experiences

1. Have students start on Home Study.

XVII. "Science is made for man, not man for science."

A. Discussion and Experiences

1. Break into two's. Pretend you are world famous scientists. Have one student take a position and defend it. Then switch and defend the other position. Which position did you like the best when finished?

a. Science is used by us for _____.

b. Science uses us for _____.

2. The "Pawn in the Hands of Science" Experience"

The class is divided into partners. Each student makes his or her own puppet. This should be a self-portrait puppet. Then each student takes one of two roles--either Science or that of an explorer on Mars. Science will control the explorer's fate (the puppet) for 5 minutes. He will try to prevent the explorer from completing his mission because Science is symbolic of technology and technology asserts non-feeling control if it is not controlled. The explorer is located on Mars and is searching for other forms of life. After 5 minutes share experiences and trade roles.

3. Make entry in journal.

XVIII. The Final Journey?

A. Discussion

1. They journeyed into the void to find the "answer" to their future.
2. They were never heard from again.
3. What was the answer they were looking for?

B. Experiences

1. What, if any, answers can you give about your future?
2. Make a final entry in journal.

XIX. Free Study or Work on Creations

XX. Return from the Looking Glass

A. Discussion

1. "The time has come," the Walrus said, "to talk of many things. Of ships and sails and sealing wax, of cabbages and kings."

2. Speculative art forms are the products of people who are not afraid to search.

B. Experiences

1. General discussion of the course as a whole.
2. Resentments, demands, and appreciations.
3. Share projects with the class
4. A speculative fiction goodbye: The class will form a circle sitting on the floor while holding hands. Students will sit silently unless moved to speak on some aspect of the course.

Notes

1. Journals: This entails a personal account of what is happening to the student during the unit. It should be done daily and must belong to the student. It is for his eyes only.

2. Free Study: On these days, unless specified, each student will decide how s/he will spend class time. This could entail:

   a. Doing reading, writing, drawing, etc. in the room or library.

   b. Individual conferences with students.

   c. Alone time. (If the student chooses to do so he can spend an entire class period doing nothing but thinking.)

3. Discussion: These are designed to focus the attention of the group on the day's theme and major ideas. In addition they can be used as starting off points for activities, experiences, writing topics, art activities, or ideas for dramatic roles.

Activities*

FIRST WEEK

1. CAUSE AND EFFECT RELATIONSHIPS

You could give the students the following sample situations:

a. You are seen taking something that does not belong to you. What are some things that might happen?

b. You run away from home. What might be some of the effects of doing this?

c. You haven't finished your homework. What are some things that might happen?

d. You are caught cheating on an exam. What might happen?

e. You wake up one morning and find you have turned into a bug. What might happen?

f. The ship that you are on sinks. You and another person your age are the only survivors left on an island. What are some things you might do?

g. You wake up one morning and find out that the sun is not shining and will never shine again. How will this change your life?

PART II--Now reverse the process above. See how many causes the students can list for each effect given.

(source: Igniting Creative Potential)

a. All books and reading materials are destroyed. It is now against the law. What are some reasons for this?

b. We no longer have teachers. We learn instead from computers. What are some reasons for this?

*Source of activities Bob Cronberg and Linda Petrzalek unless otherwise stated.

c. We could not go outside to play anymore. We could instead step into a "transporter" machine which would take us wherever we wanted to go. It is a lot safer than going outside. What are some of the reasons for this?

d. The people who worked at the power company only had to work a few hours each day. What are some reasons for this?

2. DISCOVER THE PERSON NEXT TO YOU

Have the students pair up with the person next to them--either to the right or to the left. Have each child make a list of the things he thinks his partner is. John is...

PART II--Exchange lists. Have the students compare what they really are like with what the partner has written down. Then ask "How do your ideas about yourself differ from your partner's?" Why do you think this is so?

3. PREDICTING THE FUTURE OF TECHNOLOGY

Ask students to describe what problems society has now that may no longer exist in the future because of technology.

PART II--Ask students to describe the types of machines people will use at home, at work, for travel, etc. that will eliminate many of these problems.

4. SEARCHING FOR A NEW WORLD

You have been chosen to take a trip into space. In addition you have been instructed to "search" for a new planet with conditions similar to those on Earth.

After many years you are beginning to run out of fuel. You cannot communicate with Earth except through radio message.

Either you go on in the hope of finding a new world or you can save yourself--you have enough fuel to get back to Earth. Answer these questions:

a. Why did you make the choice you did?

b. What are the consequences of your decision?

c. What did you learn about yourself in the process?

5. THE COSMIC VISITORS ARRIVAL FANTASY (source: Fantasy Encounter Games)

You and a friend are visitors from the planet Jupitor who happened to arrive on Earth the same day. You have assumed human form and are sharing experiences while walking down a city street. Discuss the following with each other:

(Arrival) How did you get here?

What adventures did you have?

Was your craft injured?

PART II--Tell each other about your experiences with humans...

What do humans like most? (or least?)

Who are the real leaders of humans?

What do humans think about?

Will humans ever destroy themselves?

Will humans contaminate the universe?

What do humans believe happens when they become non-functional (die)?

What is the greatest threat to the survival of humans?

6. Have the students collect articles in newspapers or magazines that reflect some type of change in the environment, development of new machines, or anything that would reflect a technological change.

PART II--Have the students make up books with these articles (pictures also) and have them write how they feel about each event taking place as well as how other people might feel.

SECOND WEEK

7. Have the students respond to the following kinds of questions:
   a. When I grow up I would like to be...
   b. When I get older I would like to see...
   c. What friends that I have now would I like to have when I grow up?
   d. What might I look like?
   e. Where might I live?
   f. What might my home be like?
   g. If my job requires that I work only three days per week, how will I spend my spare time?
   h. What kind of transportation might I use?

PART II--Language Arts

Have students write a story describing a futuristic event that will have a direct effect upon their lives or life style.

PART III--The Collage Fantasy

Divide the class into groups. Supply each group with magazines, construction paper, glue, and scissors. Have each group choose any magazine picture they like and build a pictorial fantasy around it. Each person who supplies detail to the collage must give some oral commentary as well. Collage fantasy is finished when paper is filled or story ideas are completed to student's satisfaction.

PART IV--Creative Dance (movement) or painting

Modern dancers or surrealists often deal with the subject of control in their work. Be (or paint) something in nature that is controlled by man. Empathize with this life form. Show through movement or design how being controlled feels. If you are dancing - what kind of movements could you use? If you are painting - what colors, lines, shapes, and textures would give the feeling of being controlled?

8. Ask students to consider discoveries of the past. Discuss some of the unsolved problems of the present. How have the problems of the past led to consequences that were unforeseen? Have students discuss how behavior control technology could be used to control the way we live. How could it change us into machines?

9. Write a short story about a robot that you are in full control of...

a) What is the robot's purpose - what does he do for you?

b) Draw a picture of him - give the robot a name.

c) Does the robot ever control you - why?

PART II--The POLE-GARS in space (see story that accompanies this activity.)

You and your friends are walking around your favorite place when a U.F.O. lands close to you. You are all curious and afraid so you hide behind some bushes to observe. Out of the ship stalks a POLE-GAR (or some other fictional name. Teacher should give each group of four students a POLE-GAR kit - that is, a kit with assorted junk to make this piece. Suggestions for items include: string, yarn, newspaper, construction paper, glue, crayons, chalk, band-aids, q-tips, cotton, fabric, pop-sickle sticks, and so on. Make sure each group has approximately the same items in their kits). The POLE-GAR is the most unusual thing you have ever seen. He walks around for awhile, devouring a

tree and a gas station, and then departs. You run home to tell about the incident but you have lost your powers of speech. Together you and your friends construct a model of the POLE-GAR to explain what has happened.

10. Pretend your space ship is totally controlled by a computer...

    1) All of a sudden, in the middle of space, your ship switches directions and is heading for the sun. Have the students write a short story telling what happens.

    2) You must do something to regain control over your space ship. What types of things might you do to take over?

11. Are you often more happy or sad? What things make you happy? What things make you sad? When do you feel both happy and sad at the same time? Can you stop yourself from feeling sad? How do you do it?

THIRD WEEK

12. PREDICTING THE FUTURE

One way to predict the future is to analyze trends throughout history. For example:

1) In 1825 there were approximately one billion people. In 1974 there are approximately four billion people.

2) In 1870 there were more than 200,000 tigers left.
In 1974 there are about 2,200 tigers left.

3) In 1956 humans flew 14 miles from earth, while in 1969 man had flown 240,000 miles from earth.

Draw a picture of what might be a result of any one of these trends. Next write a story explaining the results and the reason why this happened.

13. Get with a friend and start to think up ways in which we have developed dependency on different organizations.

PART II--Next write a story looking into the future at an organization that we have become totally dependent on. Keep these questions in mind:

1) Why have we become so dependent on this organization?
2) What does it provide us that we really need?
3) What can we do to change this?

14. Anti-Dependence Activity (ADA) "Designed for your more subversive students."

Here is a list of items and organizations we are dependent on every day. Find ways to get around using these specific items. Think of alternatives; construct one if you have time.

LIST	ALTERNATIVE
Toothpaste manufacturers (toothpaste)	Baking soda/salt
Electric companies	Alcohol lamp/candles
Furniture manufacturers	Lamp bases, tables
Clothing manufacturers	Belts, shirts, bags, jewelry

15. CITIES OF THE FUTURE

Break up the class in groups of three's or four's, then: hand your students' the mimeographed sheet with geometric shapes drawn on them. Explain that architecture, like many objects in nature, utilizes geometric shapes. Most of the buildings we see can be broken down into geometric elements. How will cities be designed in the future? Using these geometric shapes - design a city of the future.

16. Make a list of everything that you are willing to sacrifice to save the environment - compare your list with a friend's.

Student Evaluation of Student

(Source: Aaron Hillman)

1. For me, Speculative Fiction...
2. As a leader I...
3. Responsibility, to me, means...
4. If I could change, I...
5. For me, this class...
6. My participation in the class and exercises...
7. Right now I...
8. If I could change one thing...
9. I wonder...
10. My ability to respond has...
11. Comments...

Evaluation

Much of the grading will take the form of an internal assessment by each student. To accomplish this we have included a Student Evaluation of Student. If each student must be given a grade however, we would suggest that rather than test over the creative aspects of the unit, you instead test over the content areas alone.

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